

# MORBIDITY AND MORTALITY WEEKLY REPORT

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### Current Trends

#### **Update: Surveillance of Outbreaks – United States, 1990**

Although disease outbreaks are often preventable public health problems, no uniform national system exists in the United States for surveillance of outbreaks. In 1988, CDC's Epidemiology Program Office participated with the epidemiology programs in four states (Maryland, New York, Oklahoma, and Washington) in a 5-month trial of an electronic system for the timely surveillance of outbreaks (1). This report updates the initial trial by summarizing a pilot project of surveillance of outbreaks in nine states—Maryland, Mississippi, Missouri, New York, Oklahoma, Rhode Island, South Dakota, Vermont, and Washington.

The project's objective is to develop and evaluate a simple, timely electronic system of surveillance of outbreaks. From July 1, 1990, through June 30, 1991, the epidemiology programs in the participating states are conducting surveillance of all reported outbreaks (or epidemics) by using a standardized computer form to record the data and electronic telecommunications to transmit the records weekly to CDC. In July 1991, each participating state will complete an evaluation of the system. For this pilot project, an outbreak is defined as "a recent or sudden excess of cases of a specific disease or clinical syndrome. For a foodborne or waterborne outbreak,  $n \geq 2$  persons ill; for other outbreaks,  $n \geq 3$  persons ill."

From July through December 1990, the nine states reported 233 outbreaks involving 6241 cases. The number of reported outbreaks per month ranged from 33 in December to a peak of 52 in August. Fifty-eight (25%) outbreaks occurred following private gatherings or in the general community; 53 (23%) were associated with restaurants, resorts, or hotels; 47 (20%) with camps, schools, or child day care centers; 43 (18%) with medical-care settings, nursing homes, or other long-term care facilities; and 32 (14%) with other settings. Of the 176 (76%) outbreaks for which a suspected mode of transmission was reported, 102 (58%) were foodborne. State epidemiologists and/or their staff provided consultation for 122 (52%) outbreaks and either provided on-site assistance or investigated another 76 (33%). For 20 (9%), investigators were assisted by CDC epidemiologists who were either based at CDC headquarters or directly assigned to state or local health departments.

For each of 131 (56%) outbreaks,  $\geq 10$  cases were reported. These outbreaks accounted for 5754 reported cases and nine deaths. For 12 outbreaks,  $\geq 100$  cases

*Surveillance of Outbreaks — Continued*

were reported. The largest (468 cases) was an outbreak of acute gastrointestinal illness of unknown etiology (AGI) among persons attending a catered turkey dinner in November at their workplace in Oklahoma. The most commonly suspected causes of these larger outbreaks were AGI (55 [42%] outbreaks), *Shigella* (16 [12%]), and *Salmonella* (14 [11%])—of which *Salmonella enteritidis* was the suspected causative agent in nine outbreaks. In 55 (42%) of these 131 outbreaks, foodborne transmission was suspected; of these, 24 (44%) were associated with restaurants, resorts, or hotels. The rate of reported large outbreaks per million population for the 6-month period ranged from 0.8 in Mississippi to 14.1 in Vermont (Table 1) (2).

The pilot system also collects data on single case reports that may require epidemic control or prevention measures and on toxic exposures that may require similar control/prevention measures, even when no illness is reported. Among 64 case reports, the most commonly suspected cause of illness was hepatitis A virus (32 [50%]). Twenty-seven hepatitis A cases occurred among commercial food handlers; of these, 21 (78%) were reported to the state health department within 2 weeks of onset. Of the 18 such cases that were reported from New York and Oklahoma, nine required and received follow-up epidemic prevention measures, including immune globulin prophylaxis for co-workers, recommendations for prophylaxis for patrons, or announcements to educate the public about risks from exposure. Seven environmental exposures were reported; the highest number of illnesses (six) resulting from such exposures occurred in Missouri. These illnesses were associated with possible carbon monoxide exposure in an office building with a faulty furnace exhaust system.

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**TABLE 1. Number and rate\* of reported large† outbreaks — participating states, July 1–December 31, 1990**

State	No. outbreaks	Rate
Vermont	8	14.1
Maryland	37	7.9
South Dakota	4	5.6
Oklahoma	11	3.4
New York <sup>‡</sup>	35	3.3
Washington	12	2.5
Missouri	13	2.5
Rhode Island	2	2.0
Mississippi	2	0.8
Other <sup>§</sup>	2	—
<b>Total</b>	<b>126</b>	

\*Per million population.

†≥10 persons ill.

‡Does not include the population of New York City or five outbreaks reported from New York City.

§Two of the reported outbreaks that involved residents of participating states occurred out of state.

*Surveillance of Outbreaks — Continued*

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**Editorial Note:** The national system of notifiable disease reporting (presented weekly in *MMWR* Tables I, II, and III) provides surveillance data on many diseases that can cause outbreaks or epidemics; except for certain specific problems (e.g., foodborne outbreaks [3]), no national surveillance for outbreaks exists. A system that focuses surveillance efforts on outbreak detection may enhance efforts to identify preventable factors that increase the risk for outbreaks (4), even when the causative agent of an outbreak is not identified. Surveillance for outbreaks that occur in settings where outbreaks are preventable (e.g., restaurants) may assist in monitoring the effectiveness of outbreak control and prevention measures. For example, before this project began, a retrospective study in Washington indicated that low scores on routine inspections in restaurants were predictive of increased risk for foodborne outbreaks (5). Surveillance can also provide information on both the burden of disease from outbreaks and the resources required by state and local health departments to respond to outbreaks. In addition, data from surveillance of sentinel case reports or environmental/occupational exposures may assist in determining whether reporting is timely enough for epidemic prevention and/or control measures.

In this pilot project, the rates of larger outbreaks per million population vary substantially by state; reasons for this variation may include the relatively small number of outbreaks detected and differences in the completeness of reporting. Surveillance for a more extended period could provide a basis for estimating an "expected" incidence of outbreaks, which could then assist states in assessing completeness of reporting or adequacy of prevention and control measures.

Evaluations of the pilot project by each state will further assess strengths and limitations of this approach to outbreak surveillance. In particular, the assessment can examine the basic attributes of the system (6), such as timeliness of reporting and its relation to the need for information on final case counts, etiologic agents, and modes of transmission. Because simplicity of conducting surveillance must be considered in the context of limited resources, a national system of outbreak surveillance could be integrated with the existing electronic system of notifiable disease surveillance.

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## Epidemiologic Notes and Reports

### **Update: *Yersinia enterocolitica* Bacteremia and Endotoxin Shock Associated with Red Blood Cell Transfusions — United States, 1991**

From April 1987 through August 1988, four cases of *Yersinia enterocolitica* bacteremia associated with red blood cell (RBC) transfusions were reported to CDC (1,2). This report summarizes findings from the investigation of an additional six cases reported from six different states from January 1989 through February 1991 (2).

Patients, blood donors, and blood processing centers involved were in Alabama, Colorado, Georgia, Minnesota, Mississippi, New Mexico, Ohio, Oklahoma, and Tennessee. Each of the six patients developed fever and hypotension within 50 minutes after the start of transfusion. One patient developed explosive diarrhea within 10 minutes after the start of transfusion. Four of the six patients died from complications from blood contamination; the interval between transfusion and death ranged from 12 hours to 37 days.

All cultures and Gram stains of tubing segments from blood bags were negative. In each case, however, cultures of residual RBCs from the bag grew only one serotype of *Y. enterocolitica*; serotypes involved included 0:5,27 (four cases), 0:3 (one case), and 0:20 (one case). Cultures of blood from three patients were positive for the same *Y. enterocolitica* serotype as the isolate from the respective blood bag. Cultures of blood were negative for two patients (one of whom was already receiving antimicrobial therapy to which the organism was sensitive); blood from one patient was not cultured.

The RBC units had been stored at 39.2 F (4 C) for a mean of 33 days (range: 25–42 days) before transfusion. One of the units had been washed 20 hours before transfusion. All donors were interviewed; three of the donors gave histories of a diarrheal illness within 30 days of donation, one had onset of diarrheal illness on the day of donation, and two reported no diarrheal illness.

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**Editorial Note:** Bacteremia is a rare complication of blood transfusion, but it should be considered whenever a severe unexplained transfusion reaction occurs—particularly when fever and hypotension occur. From April 1987 through February 1991, seven deaths occurred among the 10 reported patients with RBC transfusion-associated *Y. enterocolitica* in the United States. During this period, an additional five cases were reported outside the United States (three in France [3–5] and one each in Australia [6] and Belgium [7]).

From April 1987 through February 1991, *Y. enterocolitica* was responsible for seven of the eight total transfusion-associated fatalities linked to bacterial contamination of RBCs that had been reported to the Food and Drug Administration (FDA) (FDA, unpublished data). Because nonfatal transfusion-associated *Y. enterocolitica*

*Yersinia enterocolitica* — Continued

bacteremia is not required to be reported in the United States, its incidence is unknown. The reason for the apparent increase in reported transfusion-associated *Y. enterocolitica* bacteremia is unknown. However, surveillance data suggest that the incidence of *Y. enterocolitica* gastroenteritis may be increasing and the serotypes involved may be changing (CDC, unpublished data).

The investigation reported here suggests that blood contamination resulted from asymptomatic *Y. enterocolitica* bacteremia in the blood donors at the time of donation. Under conditions of cold storage and iron enrichment from RBCs, *Y. enterocolitica* can proliferate after a lag phase of 10–20 days (8). The absence of bacteria in the low-volume tubing segments tested is consistent with a low level of bacterial contamination at the time of collection.

The recent appearance of *Y. enterocolitica* as a bacterial contaminant of RBCs underscores the need for careful monitoring during the infusion of all blood components. CDC, FDA, and representatives of blood banking and medical organizations are assessing alternatives to prevent septic and/or endotoxic shock resulting from *Y. enterocolitica* contamination of RBCs. Potential measures include: 1) screening blood donors for a recent history of gastrointestinal illness; 2) reducing the shelf life of RBCs; and 3) testing RBC units  $\geq 25$  days old for endotoxin or the presence of bacterial organisms. However, of the six donors in this report, three would not have been excluded by a program to screen donors for a history of gastrointestinal illness; moreover, such a program could potentially exclude 1%–13% of the current donor population (FDA, unpublished data).

Reducing the shelf life of RBCs to 25 days might reduce RBC availability at blood centers, particularly those that import blood, and result in shortages during critical periods of the year when blood products are already in short supply. In one study, 5%–61% (median: 16.5%) of all RBC units transfused from 10 blood centers were  $\geq 28$  days old (FDA, unpublished data).

Recent data suggest that testing of older units (i.e.,  $\geq 25$  days old) for endotoxin and/or microorganisms may be a simple and rapid method to determine endotoxin or microbial contamination (CDC unpublished data). When RBCs were inoculated with low levels (1 colony-forming unit [CFU]/mL) of *Y. enterocolitica*,  $\geq 1$  ng/mL of endotoxin was detected by 26 days when bacterial counts were  $10^7$ – $10^8$  CFU/mL, and hematologic stains detected bacteria by day 21 when counts were  $10^5$  CFU/mL. The preliminary results of this pilot study suggest that the screening of all blood units  $\geq 25$  days old by the acridine-orange, Wright, or Wright-Giemsa stains may be a simple and effective method to detect *Y. enterocolitica* contamination of RBCs.

When transfusion-associated bacteremia or endotoxemia is suspected, the residual blood in the bag should be examined by a hematologic stain (i.e., acridine-orange, Wright, or Wright-Giemsa), and blood in the bag and samples of the recipient's blood should be cultured (6,9). The blood bag and bacterial isolates should be saved until an investigation can be completed. Physicians are requested to report, through state health departments, transfusion-associated *Y. enterocolitica* infections to the Epidemiology Branch, Hospital Infections Program, Center for Infectious Diseases, CDC; telephone (404) 639-3407. Fatalities must be reported by the transfusion service to the Office of Compliance, Center for Biologics Evaluation and Research, FDA; telephone (301) 295-8191.

*Yersinia enterocolitica* — Continued*References*

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*Current Trends***Alcohol-Related Traffic Fatalities Among Youth and Young Adults — United States, 1982–1989**

Unintentional injuries account for approximately half of all deaths among young persons aged 15–24 years in the United States; of these deaths, approximately 75% involve motor vehicles (1). Although alcohol use increases the risk for a motor vehicle crash for all drivers, for young drivers the risk begins to increase at very low blood alcohol concentrations (BACs) (2–4). Moreover, in young persons who drive after drinking, the relative risk for crash involvement is greater at all BAC levels than it is for older drinking drivers (5). This report summarizes data from the National Highway Traffic Safety Administration's (NHTSA) Fatal Accident Reporting System on trends in alcohol-related traffic fatalities (ARTFs) in the United States from 1982 through 1989; trends are presented for three groups of young persons (15- to 17-, 18- to 20-, and 21- to 24-year-olds) and are compared with those for adults aged  $\geq 25$  years.

NHTSA considers a fatal traffic crash to be alcohol-related if either a driver or nonoccupant (e.g., pedestrian) had a BAC  $\geq 0.01$  g/dL in a police-reported traffic crash. NHTSA defines a BAC  $\geq 0.01$  g/dL but  $< 0.10$  g/dL as a low level of alcohol and a BAC  $\geq 0.10$  g/dL (the legal level of intoxication in most states) as indicating intoxication. Because BAC levels are not available for all persons involved in fatal crashes, NHTSA estimates the number of ARTFs based on a discriminant analysis of information from all cases for which driver or nonoccupant BAC data are available (6). In this report, "alcohol-impaired" refers to drivers with a BAC  $\geq 0.01$  g/dL. Statistics on drivers refer only to drivers involved in fatal crashes.

From 1982 through 1989, the estimated percentage of ARTFs decreased for all four age groups (Table 1). The reductions in the proportion of ARTFs were greater for persons aged 15–17 years (31%) and 18–20 years (22%) than for those 21–24 years



*Alcohol-Related Traffic Fatalities — Continued*

(7%) and  $\geq 25$  years (11%). However, among adults aged  $\geq 25$  years, the estimated number of fatalities increased, while for the three younger age groups, the number decreased (Table 1).

During 1982–1989, the estimated percentage of alcohol-impaired drivers involved in fatal crashes also decreased in all four age groups (Table 2). Decreases in both the total and average annual proportion of ARTFs were greater for 15- to 17-year-olds (40% and 7%, respectively) and 18- to 20-year-olds (28% and 5%, respectively) than for 21- to 24-year-olds (13% and 2%, respectively) and  $\geq 25$ -year-olds (14% and 2%, respectively).

Driver involvement rates in fatal crashes per 100,000 licensed drivers were lowest for all BACs for adults  $\geq 25$  years (Table 3). Rates were high for young drivers aged 15–17 years, even in crashes where no alcohol was present. Drivers aged  $< 25$  years

(Continued on page 185)

**TABLE 1. Estimated number and percentage\* of total traffic fatalities involving at least one person† with a blood alcohol concentration  $\geq 0.01\%$ , by year and age group — United States, 1982–1989**

Year	Age group (yrs)							
	15–17		18–20		21–24		$\geq 25$	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1982	1,557	(53.6)	3,824	(68.3)	4,593	(71.7)	14,094	(55.0)
1983	1,342	(48.9)	3,404	(65.9)	4,331	(71.9)	13,576	(53.5)
1984	1,354	(47.2)	3,364	(64.3)	4,398	(69.9)	13,674	(51.5)
1985	1,270	(44.8)	2,914	(60.3)	4,182	(67.6)	13,400	(50.4)
1986	1,514	(44.6)	3,124	(60.7)	4,306	(68.8)	14,124	(50.7)
1987	1,400	(42.1)	2,811	(57.5)	3,937	(66.5)	14,561	(50.5)
1988	1,240	(40.2)	2,947	(56.7)	3,934	(67.1)	14,571	(49.4)
1989	1,030	(36.9)	2,505	(53.3)	3,452	(66.6)	14,539	(49.2)

\*Percentage of persons in each age group who died in an alcohol-related crash.

†Driver or nonoccupant.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

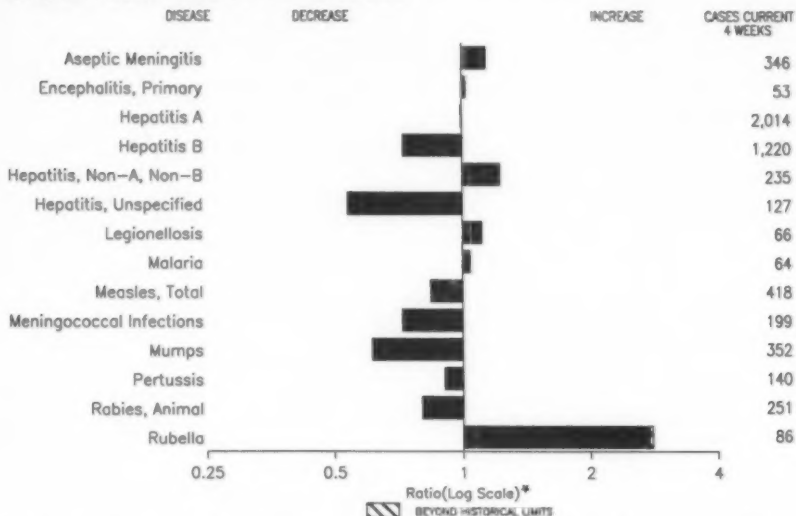
**TABLE 2. Estimated number and percentage\* of drivers† with a blood alcohol concentration  $\geq 0.01\%$  involved in fatal crashes, by year and age group — United States, 1982–1989**

Year	Age group (yrs)							
	15–17		18–20		21–24		$\geq 25$	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
1982	910	(31.5)	3,468	(48.3)	4,645	(51.5)	12,168	(34.2)
1983	826	(29.1)	3,141	(46.8)	4,270	(50.6)	11,723	(33.1)
1984	799	(26.8)	3,128	(44.3)	4,392	(49.0)	11,741	(31.5)
1985	734	(24.0)	2,653	(40.2)	4,156	(45.9)	11,451	(30.2)
1986	910	(25.4)	2,850	(41.4)	4,313	(47.2)	12,008	(30.5)
1987	853	(23.6)	2,509	(38.1)	4,004	(45.5)	12,457	(30.3)
1988	776	(22.4)	2,562	(36.9)	3,935	(46.0)	12,624	(30.1)
1989	592	(18.9)	2,269	(34.8)	3,476	(45.0)	12,278	(29.5)

\*Percentage of involved drivers in each age group who were alcohol-impaired.

†Regardless of whether driver was killed.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

**FIGURE 1. Notifiable disease reports, comparison of 4-week totals ending March 16, 1991, with historical data — United States**

\*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE 1. Summary — cases of specified notifiable diseases, United States, cumulative, week ending March 16, 1991 (11th Week)**

	Cum. 1991		Cum. 1991
AIDS	8,765	Measles: imported	22
Anthrax	-	indigenous	1,006
Botulism: Foodborne	4	Plague	-
Infant	10	Poliomyelitis, Paralytic*	-
Other	-	Psittacosis	13
Brucellosis	12	Rabies, human	-
Cholera	-	Syphilis, primary & secondary	8,748
Congenital rubella syndrome	4	Syphilis, congenital, age < 1 year	-
Diphtheria	1	Tetanus	-
Encephalitis, post-infectious	10	Toxic shock syndrome	78
Gonorrhea	115,993	Trichinosis	-
Haemophilus influenzae (invasive disease)	815	Tuberculosis	3,585
Hansen Disease	19	Tularemia	13
Leptospirosis	20	Typhoid fever	59
Lyme Disease	564	Typhus fever, tickborne (RMSF)	13

\*No cases of suspected poliomyelitis have been reported in 1991; none of the 6 suspected cases in 1990 have been confirmed to date. Five of 13 suspected cases in 1989 were confirmed and all were vaccine associated.



TABLE II. Cases of selected notifiable diseases, United States, weeks ending March 16, 1991, and March 17, 1990 (11th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral, by type)				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA, NB	Unspecified		
	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	8,765	1,009	107	10	115,993	144,030	5,166	3,119	681	287	217	564
NEW ENGLAND	404	49	8	-	3,555	4,240	124	192	41	10	22	40
Maine	15	2	3	-	21	58	4	1	1	-	-	-
N.H.	11	2	-	-	60	50	14	6	2	-	1	2
Vt.	6	3	-	-	14	15	5	1	1	-	-	1
Mass.	242	18	3	-	1,379	1,568	67	163	36	8	20	27
R.I.	13	21	-	-	231	224	18	7	1	2	1	10
Conn.	117	3	2	-	1,850	2,325	16	14	-	-	-	-
MID. ATLANTIC	2,745	141	5	4	12,870	17,180	385	270	46	8	57	369
Upstate N.Y.	402	61	4	3	2,427	2,968	244	123	32	3	21	337
N.Y. City	1,583	9	-	-	3,197	8,743	25	6	-	-	3	-
N.J.	483	-	-	-	2,529	3,109	45	77	5	-	6	32
Pa.	277	71	1	1	4,717	2,420	71	64	9	5	27	-
E.N. CENTRAL	595	166	25	2	20,375	28,779	501	368	164	15	36	40
Ohio	102	61	7	1	8,456	8,744	114	84	43	6	18	26
Ind.	48	22	5	1	2,462	2,621	102	52	1	-	3	-
Ill.	307	15	3	-	6,477	8,789	108	15	3	-	-	-
Mich.	91	61	9	-	5,402	6,805	83	131	27	9	10	14
Wis.	47	7	1	-	578	1,820	94	86	90	-	5	-
W.N. CENTRAL	304	71	7	-	6,141	7,809	746	120	60	5	12	6
Minn.	67	12	5	-	659	925	80	5	1	-	2	2
Iowa	22	20	-	-	437	572	17	5	4	-	-	4
Mo.	160	27	-	-	3,807	4,491	162	94	50	3	7	-
N. Dak.	18	-	-	-	11	37	11	2	-	-	-	-
S. Dak.	-	4	-	-	97	46	332	1	-	-	1	-
Nebr.	14	7	-	-	404	379	122	8	-	-	2	-
Kans.	23	1	-	-	726	1,359	22	1	1	-	-	-
S. ATLANTIC	1,854	230	20	3	35,673	40,654	340	742	84	51	28	28
Del.	23	6	-	-	495	533	3	12	2	1	-	7
Md.	164	27	4	-	3,566	4,541	79	99	18	4	8	9
D.C.	135	8	-	-	2,424	2,065	23	20	-	1	-	-
Va.	128	44	4	-	3,279	4,010	44	56	5	35	2	7
W. Va.	9	2	1	-	272	270	6	20	1	3	-	1
N.C.	101	29	7	-	8,852	6,921	55	141	34	-	6	4
S.C.	80	10	-	-	2,697	3,563	10	180	15	2	7	-
Ga.	353	18	2	1	9,178	8,757	38	90	3	-	1	-
Fla.	861	86	2	2	6,910	9,994	82	124	6	5	4	-
E.S. CENTRAL	178	73	5	-	10,511	11,971	47	233	78	2	16	16
Ky.	33	20	2	-	1,059	1,407	8	46	5	2	6	11
Tenn.	55	16	2	-	4,019	3,591	26	159	70	-	4	4
Ala.	62	24	1	-	2,698	4,204	12	28	3	-	2	3
Miss.	28	13	-	-	2,735	2,769	1	-	-	-	-	-
W.S. CENTRAL	729	64	8	-	13,059	14,811	657	274	18	37	7	12
Ark.	29	26	1	-	1,625	1,992	101	13	1	2	-	7
La.	131	7	1	-	2,829	2,648	34	54	1	1	3	-
Okla.	27	1	3	-	1,359	1,325	95	66	12	6	4	5
Tex.	543	30	3	-	7,246	8,646	427	141	4	28	-	-
MOUNTAIN	225	45	8	1	2,243	3,224	903	209	33	59	24	2
Mont.	4	2	-	-	17	26	33	22	1	2	-	-
Idaho	3	-	-	-	28	20	13	25	-	-	3	-
Wyo.	3	-	-	-	26	35	57	3	-	-	-	2
Colo.	101	16	1	1	436	909	69	36	11	8	3	-
N. Mex.	11	6	-	-	233	221	274	29	2	19	1	-
Ariz.	55	14	7	-	963	1,317	320	46	4	25	9	-
Utah	11	2	-	-	88	91	76	7	5	5	4	-
Nev.	37	5	-	-	452	605	61	41	10	-	4	-
PACIFIC	1,731	170	21	-	11,566	15,562	1,463	711	157	100	16	49
Wash.	70	-	-	-	826	1,429	114	100	27	6	1	-
Oreg.	40	-	-	-	411	567	90	65	24	2	1	-
Calif.	1,570	154	21	-	9,999	13,214	1,225	529	99	91	13	49
Alaska	5	4	-	-	167	263	28	5	6	1	-	-
Hawaii	46	12	-	-	183	99	8	12	1	-	1	-
Guam	-	-	-	-	-	44	-	-	-	-	-	-
P.R.	350	44	-	1	105	278	19	101	19	11	-	-
V.I.	1	-	-	-	136	103	-	2	-	-	-	-
Amer. Samoa	-	-	-	-	-	35	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	40	-	-	-	-	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending March 16, 1991, and March 17, 1990 (11th Week)

Reporting Area	Malaria	Measles (Rubella)					Menin- gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
		Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991
UNITED STATES	175	138	1,006	-	22	3,779	478	99	736	24	445	609	54	131	102
NEW ENGLAND	11	2	3	-	2	91	46	1	10	-	36	78	-	1	2
Maine	-	-	-	-	-	27	4	-	-	-	5	1	-	-	-
N.H.	-	-	-	-	-	7	6	-	2	-	11	7	-	1	-
Vt.	1	2	2	-	-	1	6	-	-	-	1	2	-	-	-
Mass.	6	-	-	-	-	2	23	-	-	-	18	63	-	-	-
R.I.	2	-	-	-	-	16	-	-	2	-	-	-	-	-	-
Conn.	1	-	1	-	2	38	7	1	6	-	1	5	-	-	1
MID. ATLANTIC	15	47	389	-	-	368	48	6	53	1	52	146	45	54	2
Upstate N.Y.	4	-	-	-	-	188	25	4	29	1	26	117	42	48	1
N.Y. City	3	-	60	-	-	35	2	-	-	-	-	-	-	-	-
N.J.	5	-	31	-	-	14	7	-	2	-	1	10	-	-	-
Pa.	3	47	298	-	-	131	14	2	22	-	25	19	3	6	1
E.N. CENTRAL	11	3	19	-	2	1,737	66	3	60	2	87	177	-	5	8
Ohio	3	-	-	-	1	136	24	-	-	-	34	26	-	-	-
Ind.	1	-	-	-	-	100	9	-	3	1	17	31	-	-	-
Ill.	2	-	-	-	-	746	15	-	33	-	15	60	-	2	8
Mich.	5	3	18	-	-	255	14	3	21	1	17	27	-	2	-
Wis.	-	-	1	-	1	500	4	-	3	-	4	33	-	-	-
W.N. CENTRAL	3	-	1	-	1	96	21	9	38	-	32	18	-	3	-
Minn.	-	-	-	-	-	28	6	-	2	-	11	-	-	2	-
Iowa	1	-	-	-	-	21	1	1	7	-	4	1	-	-	-
Mo.	2	-	-	-	-	47	10	2	4	-	12	13	-	1	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	-	2	1	3	-	4	1	-	-	-
Kans.	-	-	-	-	-	-	1	5	22	-	-	1	-	-	-
S. ATLANTIC	48	15	56	-	6	217	88	33	234	5	30	52	1	8	9
Del.	-	2	6	-	-	4	-	1	1	-	-	2	-	-	-
Md.	16	12	16	-	-	27	12	11	70	3	6	18	1	8	-
D.C.	3	-	-	-	-	1	-	1	4	-	-	1	-	-	-
Va.	7	-	1	-	-	11	8	4	18	-	3	4	-	-	-
W. Va.	1	-	-	-	-	6	4	1	6	-	6	5	-	-	-
N.C.	1	-	-	-	-	3	21	1	62	-	7	8	-	-	-
S.C.	4	-	12	-	-	1	13	2	41	-	-	3	-	-	-
Ga.	4	-	-	-	-	6	18	7	12	2	5	7	-	-	-
Fla.	12	1	22	-	6	158	12	5	20	-	3	4	-	-	9
E.S. CENTRAL	2	-	1	-	-	34	44	3	23	1	15	16	-	-	1
Ky.	1	-	-	-	-	-	21	-	-	-	-	-	-	-	-
Tenn.	-	-	1	-	-	17	10	2	12	-	7	5	-	-	1
Ala.	1	-	-	-	-	4	13	-	2	1	8	10	-	-	-
Miss.	-	-	-	-	-	13	-	1	9	-	-	1	-	-	-
W.S. CENTRAL	11	-	-	-	5	249	29	23	114	-	12	5	-	1	-
Ark.	1	-	-	-	5	-	7	11	19	-	-	-	-	-	-
La.	2	-	-	-	-	-	8	-	9	-	7	1	-	-	-
Okl.	1	-	-	-	-	39	2	-	1	-	5	4	-	-	-
Tex.	7	-	-	-	-	210	12	12	86	-	-	-	-	-	-
MOUNTAIN	9	2	96	-	4	101	22	10	38	9	77	54	-	1	3
Mont.	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	1	3	4	-	2	-	17	2	-	-	3
Wyo.	-	-	-	-	-	-	1	2	2	-	3	-	-	-	-
Colo.	3	-	-	-	1	13	3	1	7	9	27	37	-	-	-
N. Mex.	1	2	64	-	2	22	4	N	N	-	12	2	-	-	-
Ariz.	4	-	25	-	-	45	5	2	19	-	8	7	-	-	-
Utah	-	-	-	-	-	-	-	5	8	-	10	3	-	-	-
Nev.	-	-	7	-	-	18	1	-	-	-	-	3	-	1	-
PACIFIC	65	69	441	-	2	886	114	11	186	6	104	63	8	58	77
Wash.	5	-	-	-	-	14	10	1	40	-	16	16	-	-	-
Oreg.	1	3	4	-	-	77	10	N	N	-	16	6	-	-	-
Calif.	57	65	434	-	2	755	91	10	117	1	49	37	8	57	73
Alaska	-	-	-	-	-	38	3	-	4	-	4	-	-	-	-
Hawaii	2	1	3	-	-	2	-	-	5	5	19	4	-	1	4
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	-	-	-	-	1	47	11	2	5	-	6	4	-	1	-
V.I.	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

\*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable

U: Unavailable

†International

‡Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending March 16, 1991, and March 17, 1990 (11th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic- shock Syndrome	Tuberculosis		Tul- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	8,748	9,269	78	3,585	4,121	13	59	13	824
NEW ENGLAND	231	414	5	87	71	-	6	2	1
Maine	-	3	3	-	-	-	-	-	-
N.H.	2	28	1	-	1	-	-	-	1
Vt.	1	1	-	-	2	-	-	-	-
Mass.	118	144	1	38	29	-	6	2	-
R.I.	11	1	-	16	15	-	-	-	-
Conn.	99	237	-	33	24	-	-	-	-
MID. ATLANTIC	1,569	1,626	13	880	1,056	-	8	-	289
Upstate N.Y.	103	119	7	26	112	-	2	-	91
N.Y. City	733	1,115	-	612	676	-	2	-	-
N.J.	272	343	-	157	134	-	4	-	134
Pa.	461	49	6	85	134	-	-	-	64
E.N. CENTRAL	955	615	14	459	392	1	7	-	10
Ohio	122	110	10	74	51	-	1	-	1
Ind.	22	6	-	18	23	-	-	-	-
Ill.	388	240	1	262	189	-	-	-	2
Mich.	218	164	3	76	113	1	5	-	2
Wis.	105	95	-	29	16	-	1	-	5
W.N. CENTRAL	153	72	16	86	88	2	1	-	110
Minn.	17	23	7	11	16	-	1	-	42
Iowa	18	6	4	21	10	-	-	-	20
Mo.	89	33	4	29	37	2	-	-	2
N. Dak.	-	1	-	1	4	-	-	-	8
S. Dak.	1	10	-	4	-	-	-	-	29
Nebr.	1	2	1	3	7	-	-	-	2
Kans.	27	7	-	11	10	-	-	-	6
S. ATLANTIC	2,760	3,245	5	560	711	1	9	8	214
Del.	30	48	1	7	13	-	-	-	33
Md.	248	277	-	51	66	-	5	1	75
D.C.	148	162	-	35	18	-	-	-	2
Va.	234	149	1	54	61	-	1	-	38
W. Va.	4	3	-	19	13	-	1	-	17
N.C.	400	371	3	79	90	-	-	6	-
S.C.	354	200	-	69	104	-	-	-	13
Ge.	674	767	-	111	91	-	2	1	33
Fla.	668	1,268	-	135	256	1	-	-	3
E.S. CENTRAL	904	691	3	227	280	1	-	2	19
Ky.	16	18	-	66	80	-	-	1	4
Tenn.	386	218	2	-	63	1	-	-	7
Ala.	266	223	1	92	96	-	-	1	8
Miss.	236	232	-	69	41	-	-	-	-
W.S. CENTRAL	1,414	1,486	3	346	502	4	1	1	88
Ark.	69	110	1	36	56	3	-	-	7
La.	502	466	-	66	94	-	1	-	3
Okla.	34	52	2	15	39	1	-	1	29
Tex.	809	868	-	229	313	-	-	-	49
MOUNTAIN	129	167	9	83	67	3	3	-	8
Mont.	1	-	-	-	4	2	-	-	4
Idaho	3	4	-	1	1	-	-	-	1
Wyo.	1	-	-	1	1	1	-	-	-
Colo.	15	14	-	6	-	-	-	-	1
N. Mex.	8	11	3	-	16	-	-	-	1
Ariz.	84	112	3	55	30	-	2	-	1
Utah	3	1	3	13	-	-	-	-	-
Nev.	16	25	-	7	15	-	1	-	-
PACIFIC	733	953	10	857	954	1	24	-	85
Wash.	32	95	1	47	58	1	-	-	-
Oreg.	74	24	-	13	19	-	1	-	-
Calif.	674	818	9	746	828	-	22	-	84
Alaska	2	5	-	6	17	-	-	-	-
Hawaii	-	11	-	45	32	-	1	-	-
Guam	-	-	-	-	9	-	-	-	-
P.R.	75	115	-	38	29	-	-	-	7
V.I.	35	-	-	1	1	-	-	-	-
Amer. Samoa	-	-	-	-	5	-	-	-	-
C.N.M.I.	-	-	-	-	7	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,\* week ending  
March 16, 1991 (11th Week)

Reporting Area	All Causes, By Age (Years)						P&I**	Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	602	397	120	52	12	21	47	S. ATLANTIC	1,411	869	274	162	49	54	70
Boston, Mass.	173	100	36	22	4	11	17	Atlanta, Ga.	206	110	37	33	7	19	14
Bridgeport, Conn.	38	29	6	2	1	-	3	Baltimore, Md.	205	122	47	26	5	5	8
Cambridge, Mass.	28	20	7	1	-	-	4	Charlotte, N.C.	75	52	12	5	3	3	4
Fall River, Mass.	20	17	3	-	-	-	-	Jacksonville, Fla.	111	75	16	14	5	1	4
Hartford, Conn.	27	15	7	2	1	2	-	Miami, Fla.	116	66	31	10	4	5	-
Lowell, Mass.	21	14	4	3	-	-	2	Norfolk, Va.	68	42	13	6	3	4	4
Lynn, Mass.	11	6	5	-	-	-	-	Richmond, Va.	76	48	14	9	2	3	2
New Bedford, Mass.	26	21	3	2	-	-	-	Savannah, Ga.	46	30	10	5	1	-	4
New Haven, Conn.	56	34	11	7	3	1	1	St. Petersburg, Fla.	96	82	9	2	1	2	3
Providence, R.I.	62	49	9	2	-	2	7	Tampa, Fla.	180	114	26	10	5	4	18
Somerville, Mass.	6	4	2	-	-	-	1	Washington, D.C.	230	110	55	42	13	8	9
Springfield, Mass.	48	28	10	7	2	1	4	Wilmington, Del.	22	18	4	-	-	-	-
Waterbury, Conn.	35	22	8	2	1	2	4	E.S. CENTRAL	856	553	168	72	29	34	64
Worcester, Mass.	51	38	9	2	-	2	4	Birmingham, Ala.	155	90	30	17	9	9	4
MID. ATLANTIC	1,844	530	110	61	61	109	189	Chattanooga, Tenn.	45	35	6	1	3	-	4
Albany, N.Y.	43	25	12	4	2	-	3	Knoxville, Tenn.	88	62	15	8	-	3	6
Allentown, Pa.	24	17	6	-	1	-	2	Louisville, Ky.	163	112	31	11	8	1	15
Buffalo, N.Y.	100	70	20	6	1	3	10	Memphis, Tenn.	218	140	51	16	5	6	20
Camden, N.J.	52	38	6	5	1	2	5	Mobile, Ala.	23	5	2	3	1	12	1
Elizabeth, N.J.	24	20	2	-	-	-	4	Montgomery, Ala.	55	40	11	4	-	-	6
Erie, Pa.	45	34	6	3	2	-	5	Nashville, Tenn.	109	69	22	12	3	3	8
Jersey City, N.J.	69	41	16	4	3	5	1	W.S. CENTRAL	1,511	946	313	156	48	48	78
New York City, N.Y.	1,437	904	286	188	34	25	75	Austin, Tex.	68	43	14	9	1	1	4
Newark, N.J.	62	31	13	15	1	2	5	Baton Rouge, La.	44	26	7	8	2	1	3
Petersen, N.J.	35	25	2	5	-	3	-	Corpus Christi, Tex.	38	25	10	1	1	-	-
Philadelphia, Pa.	425	276	84	44	8	13	28	Dallas, Tex.	210	122	41	32	9	6	7
Pittsburgh, Pa.	81	61	11	5	1	3	9	El Paso, Tex.	68	46	16	1	3	2	5
Reading, Pa.	35	29	5	1	-	-	7	Ft. Worth, Tex.	99	57	23	11	4	4	4
Rochester, N.Y.	28	18	22	11	2	2	13	Houston, Tex.	346	198	79	43	18	7	33
Schenectady, N.Y.	28	17	7	2	1	1	2	Little Rock, Ark.	54	31	14	6	1	2	1
Scranton, Pa.	22	16	2	3	1	1	2	New Orleans, La.	238	159	43	22	3	11	-
Syracuse, N.Y.	87	67	15	3	1	1	11	San Antonio, Tex.	179	113	38	17	5	6	8
Trenton, N.J.	52	36	10	5	-	1	2	Shreveport, La.	44	35	6	-	1	2	3
Utica, N.Y.	26	20	2	2	2	-	2	Tulsa, Okla.	123	90	22	6	-	4	10
Yonkers, N.Y.	14	9	3	2	-	-	3	MOUNTAIN	772	529	137	64	20	32	76
E.N. CENTRAL	2,280	1,438	426	246	113	57	143	Albuquerque, N.M.	84	59	12	9	1	3	9
Akron, Ohio	42	32	3	4	1	2	-	Colo. Springs, Colo.	65	41	13	8	1	2	9
Canton, Ohio	37	24	9	3	-	1	6	Denver, Colo.	120	83	16	13	4	4	19
Chicago, Ill.	573	274	106	114	89	10	36	Las Vegas, Nev.	142	93	32	12	3	2	11
Cincinnati, Ohio	99	61	27	4	3	4	8	Ogden, Utah	26	19	5	1	1	-	5
Cleveland, Ohio	184	108	49	13	7	7	7	Phoenix, Ariz.	142	92	27	13	5	5	3
Columbus, Ohio	203	141	31	16	6	9	5	Pueblo, Colo.	29	24	3	1	1	-	4
Dayton, Ohio	114	88	18	6	2	-	7	Salt Lake City, Utah	44	28	7	4	2	3	6
Detroit, Mich.	249	147	54	35	8	5	9	Tucson, Ariz.	120	90	22	3	2	3	10
Evansville, Ind.	40	31	5	3	1	-	-	PACIFIC	2,220	1,506	385	216	89	57	139
Fort Wayne, Ind.	67	49	13	4	1	-	3	Berkeley, Calif.	23	20	2	-	1	-	1
Gary, Ind.	35	19	6	7	3	-	1	Fresno, Calif.	86	57	14	9	1	5	5
Grand Rapids, Mich.	36	28	5	1	1	1	3	Glendale, Calif.	85	34	4	4	3	-	3
Indianapolis, Ind.	194	132	37	15	6	4	20	Honolulu, Hawaii	97	67	14	9	4	3	9
Madison, Wis.	35	21	8	2	1	3	4	Long Beach, Calif.	87	66	8	8	-	5	10
Minneapolis, Minn.	141	106	20	10	2	3	11	Los Angeles, Calif.	766	506	158	72	36	9	32
Peoria, Ill.	36	31	3	-	-	2	8	Oakland, Calif.	U	U	U	U	U	U	U
Rockford, Ill.	44	34	4	3	2	1	8	Pasadena, Calif.	31	18	4	7	-	2	2
South Bend, Ind.	55	45	9	1	-	-	3	Portland, Ore.	127	90	21	9	2	5	5
Toledo, Ohio	96	67	19	5	-	5	4	Sacramento, Calif.	171	122	28	11	4	6	17
Youngstown, Ohio	U	U	U	U	U	U	U	San Diego, Calif.	155	96	21	21	9	7	17
W.N. CENTRAL	899	635	162	82	20	30	65	San Francisco, Calif.	171	106	30	32	-	2	9
Des Moines, Iowa	76	55	13	6	-	2	7	San Jose, Calif.	148	107	21	11	3	6	8
Duluth, Minn.	34	30	2	-	2	-	3	Seattle, Wash.	153	94	36	16	1	6	5
Kansas City, Kans.	40	27	7	3	3	-	3	Spokane, Wash.	65	51	8	2	3	1	3
Kansas City, Mo.	114	86	14	10	2	2	10	Tacoma, Wash.	96	72	16	5	2	-	13
Lincoln, Nebr.	35	28	5	2	-	-	2	TOTAL	13,357 <sup>††</sup>	8,717	2,495	1,330	421	282	871
Minneapolis, Minn.	280	172	50	17	7	14	24								
Omaha, Nebr.	104	76	24	1	-	3	5								
St. Louis, Mo.	123	87	19	5	3	7	4								
St. Paul, Minn.	51	34	10	5	2	-	5								
Wichita, Kans.	64	40	18	3	1	2	2								

\*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

\*\*Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Report for this week is unavailable (U).

## Alcohol-Related Traffic Fatalities — Continued

TABLE 3. Estimated rate\* of drivers† involved in fatal crashes, by age group‡ and driver blood alcohol concentration (BAC) — United States, 1982–1989

Year/Age group (yrs)	Rate			Total
	No alcohol (BAC=0.00 g/dL)	Alcohol-related (BAC ≥0.01 g/dL)	Intoxicated (BAC ≥0.10 g/dL)	
<b>1982</b>				
15–17	46	21	13	67
18–20	36	34	24	70
21–24	28	29	23	57
≥25	20	10	8	30
<b>1983</b>				
15–17	46	19	12	64
18–20	34	30	21	63
21–24	26	26	20	52
≥25	19	10	8	29
<b>1984</b>				
15–17	52	19	11	71
18–20	41	33	23	74
21–24	29	28	21	58
≥25	20	9	7	30
<b>1985</b>				
15–17	57	18	11	74
18–20	43	29	20	71
21–24	32	27	21	59
≥25	21	9	7	30
<b>1986</b>				
15–17	63	22	12	85
18–20	46	32	22	78
21–24	33	29	22	62
≥25	21	9	7	30
<b>1987</b>				
15–17	65	20	11	85
18–20	46	28	19	74
21–24	33	28	21	61
≥25	21	9	7	31
<b>1988</b>				
15–17	66	19	11	85
18–20	49	29	19	78
21–24	33	28	22	62
≥25	22	9	7	31
<b>1989</b>				
15–17	67	16	8	83
18–20	47	25	17	72
21–24	31	25	19	56
≥25	21	9	7	30

\*Per 100,000 licensed drivers.

†Regardless of whether driver was killed.

‡Federal Highway Administration groups all licenses for persons &lt;16 years; the rate per 100,000 licenses may include data for persons &lt;15 years.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration, and Driver Licensing Data, Federal Highway Administration.

*Alcohol-Related Traffic Fatalities — Continued*

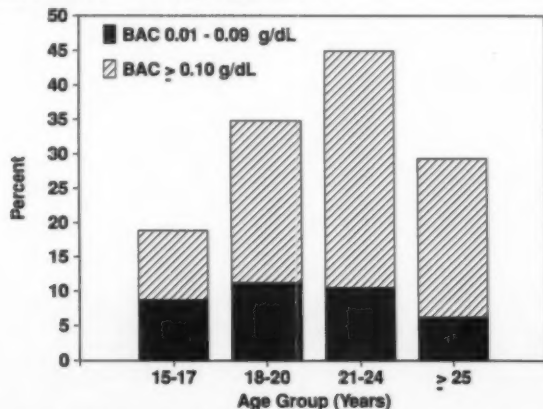
were more likely than those  $\geq 25$  years to be intoxicated in a fatal crash. In 1989, the prevalence of intoxication in drivers involved in fatal crashes increased with age: of the 15- to 17-year-old alcohol-impaired drivers involved in fatal crashes, 54% were intoxicated, compared with 68% of 18- to 20-year-olds, 77% of 21- to 24-year-olds, and 79% of  $\geq 25$ -year-olds (Figure 1).

Reported by: ME Vegega, PhD, Office of Alcohol and State Programs, Traffic Safety Programs; TM Klein, National Center for Statistics and Analysis, Research and Development, National Highway Traffic Safety Administration. Unintentional Injury Section, Epidemiology Br, Div of Injury Control, Center for Environmental Health and Injury Control, CDC.

**Editorial Note:** Although the percentage of ARTFs has declined among young persons since 1982, alcohol-impaired driving remains a major public health problem; in 1989, approximately 7000 persons aged 15–24 years died in alcohol-related crashes (Table 1). The percentage of alcohol-impaired drivers involved in fatal crashes underscores the need for additional effective intervention efforts.

Factors that may have contributed to the reduction in both ARTFs and impaired driving among young persons include 1) increases in the minimum drinking age in 37 states from 1982 to 1988—in all 50 states and the District of Columbia, the minimum drinking age is now 21 years; 2) educational efforts and programs, such as Project Graduation, aimed at reducing drinking and driving among young persons (7); 3) formation of student groups such as Students Against Driving Drunk; and 4) changes in state laws penalizing drivers  $< 21$  years of age for driving with low BACs (generally, from 0.01 g/dL to 0.05 g/dL). Increases in the minimum drinking age have resulted in reductions in alcohol-related motor vehicle crashes, injuries, and fatalities in age groups affected by the laws (8–10). However, the consistently high proportion of alcohol-impaired driving among 18- to 20-year-olds, as well as 21- to 24-year-olds (who are legally permitted to consume alcohol), indicates a need for programmatic activities targeted specifically to drivers in these age groups.

**FIGURE 1. Blood alcohol concentration (BAC) levels of alcohol-impaired drivers\* involved in fatal crashes — United States, 1989**



\*Regardless of whether driver was killed.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.



*Alcohol-Related Traffic Fatalities — Continued*

Current NHTSA efforts to reduce alcohol-impaired driving among youth and young adults include support for student safety activities (including leadership training), provisional driver licensing guidelines, workshops for juvenile court judges, identification of effective techniques for enforcing drinking and driving laws for youth, and policy and program development workshops for college personnel and administrators. On March 15, NHTSA initiated a new public service campaign consolidating previous efforts by NHTSA, the National Basketball Association, the National Association of Broadcasters, and Mothers Against Drunk Driving. This campaign, "Celebrate with Style. Leave Alcohol Out," is directed at high school students at prom and graduation time and is designed to bring greater exposure and impact to the concept of promoting alcohol-free activities. Information on the campaign is available from Roger Kurrus, Office of Alcohol and State Programs (NTS-22), NHTSA, 400 7th Street, SW, Washington, DC 20590; telephone (202) 366-2750.

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### **Quarterly Table Reporting Alcohol Involvement in Fatal Motor Vehicle Crashes**

The following table reports alcohol involvement in fatal motor vehicle crashes. This table, which will be published quarterly in *MMWR*, focuses attention on the impact of alcohol use on highway safety. Accompanying articles (page 178 of this issue) will highlight different aspects of the epidemiology of alcohol-related traffic fatalities (ARTFs).

A fatal crash is considered alcohol-related by the National Highway Traffic Safety Administration (NHTSA) if either a driver or nonoccupant (e.g., pedestrian) had a

*Fatal Motor Vehicle Crashes — Continued*

blood alcohol concentration (BAC) of  $\geq 0.01$  g/dL in a police-reported traffic crash. Persons with a BAC  $\geq 0.10$  g/dL (the legal level of intoxication in most states) are considered intoxicated. Because BAC levels are not available for all persons in fatal crashes, NHTSA estimates the number of ARTFs based on a discriminant analysis of information from all cases for which driver or nonoccupant BAC data are available. Seasonal trends may be associated with these data.

**Estimated number and percentage of total traffic fatalities\* and drivers involved in fatal crashes, by age and blood alcohol concentration (BAC) level — United States, January–March 1990**

Age (yrs)	No. fatalities	Fatalities by BAC <sup>†</sup>					
		BAC = 0.00		0.01% $\leq$ BAC $\leq$ 0.09%		BAC $\geq$ 0.10%	
		No.	(%)	No.	(%)	No.	(%)
0–14	563	430	(76.5)	39	( 6.9)	93	(16.6)
15–20	1,453	770	(53.0)	196	(13.5)	487	(33.5)
21–24	1,057	397	(37.6)	121	(11.4)	539	(51.0)
25–34	2,015	731	(36.3)	196	( 9.7)	1,087	(54.0)
35–64	2,878	1,454	(50.5)	257	( 8.9)	1,167	(40.6)
$\geq 65$	1,478	1,181	(79.9)	94	( 6.4)	203	(13.7)
<b>Total</b>	<b>9,444</b>	<b>4,964</b>	<b>(52.6)</b>	<b>904</b>	<b>( 9.6)</b>	<b>3,576</b>	<b>(37.9)</b>

Age (yrs)	No. drivers	Drivers <sup>‡</sup> by BAC <sup>§</sup>					
		BAC = 0.00		0.01% $\leq$ BAC $\leq$ 0.09%		BAC $\geq$ 0.10%	
		No.	(%)	No.	(%)	No.	(%)
0–14**	34	31	(92.0)	2	( 4.6)	1	( 3.4)
15–20	1,858	1,315	(70.8)	187	(10.0)	357	(19.2)
21–24	1,586	937	(59.1)	141	( 8.9)	507	(32.0)
25–34	3,404	2,122	(62.3)	254	( 7.5)	1,028	(30.2)
35–64	4,444	3,378	(76.0)	232	( 5.2)	834	(18.8)
$\geq 65$	1,238	1,122	(90.6)	40	( 3.2)	76	( 6.1)
<b>Total</b>	<b>12,564</b>	<b>8,905</b>	<b>(70.9)</b>	<b>855</b>	<b>( 6.8)</b>	<b>2,804</b>	<b>(22.3)</b>

\*Fatalities include all occupants and nonoccupants who died within 30 days of a motor vehicle crash on a public road.

†The BAC distributions are estimates for drivers and nonoccupants involved in fatal crashes. Numbers of fatalities are rounded to the nearest whole number.

‡Driver may or may not have been killed.

§BAC distributions are estimates for drivers involved in fatal crashes. Numbers of drivers are rounded to the nearest whole number, and percentages may not add to 100% because of rounding.

\*\*Although usually too young to legally drive, persons in this age group are included for completeness of the data set.

Source: Fatal Accident Reporting System, National Highway Traffic Safety Administration.

### Notices to Readers

#### **NIOSH Current Intelligence Bulletin 53: Toluene Diisocyanate (TDI) and Toluenediamine (TDA); Evidence of Carcinogenicity**

CDC's National Institute for Occupational Safety and Health (NIOSH) has released *NIOSH Current Intelligence Bulletin 53: Toluene Diisocyanate (TDI) and Toluenediamine (TDA); Evidence of Carcinogenicity* (1).<sup>\*</sup> Current Intelligence Bulletins (CIBs) provide new data or update existing information about chemical substances, physical agents, or safety hazards found in the workplace.

CIB 53 presents recent information about the potential carcinogenicity of toluene diisocyanate (TDI) and toluediamine (TDA) to humans. Recent studies of chronic effects in animals indicate that cancer is associated with exposure to commercial-grade TDI (an 80:20 mixture of 2,4- and 2,6-TDI) and 2,4-TDA, a hydrolysis product of TDI. This bulletin describes the results and implications of these animal studies, describes the known health effects of TDI and TDA in humans, and suggests guidelines for minimizing occupational exposures.

No case reports or epidemiologic studies are available regarding TDI or TDA carcinogenicity in humans, but the animal data on carcinogenicity provides sufficient evidence to warrant concern about occupational exposure to TDI and TDA. The tumorigenic responses observed in both rats and mice treated with TDI or TDA meet the criteria of the Occupational Safety and Health Administration's carcinogen policy for classifying a substance as a potential occupational carcinogen (29 CFR<sup>†</sup> 1990). Although the carcinogenic potential of the other TDI and TDA isomers has not been adequately determined, exposure to all TDI and TDA isomers should be reduced. NIOSH therefore recommends that all the isomers of TDI and TDA be regarded as potential occupational carcinogens and that occupational exposures to TDI and TDA be limited to the lowest feasible concentrations.

*Reported by: Div of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health, CDC.*

#### *Reference*

1. NIOSH. Current intelligence bulletin #53: toluene diisocyanate (TDI) and toluediamine (TDA); evidence of carcinogenicity. Cincinnati: US Department of Health and Human Services, Public Health Service, CDC, 1990; DHHS publication no. (NIOSH)90-101.

<sup>\*</sup>Single copies are available without charge from the Publications Dissemination Section, Division of Standards Development and Technology Transfer, NIOSH, CDC, 4676 Columbia Parkway, Cincinnati, OH 45226; telephone (513) 533-8287.

<sup>†</sup>Code of Federal Regulations.

#### **NCHS Report on Developmental, Learning, and Emotional Problems in Children**

In 1988, CDC's National Center for Health Statistics (NCHS) conducted the National Health Interview Survey on Child Health (NHIS-CH). The survey addressed a broad range of health-related topics, including child-care arrangements; injuries and medical conditions; exposure to cigarette smoke; bedtime and sleeping arrangements; health insurance; sources of medical care; and developmental, learning, and emotional problems.

*Notices to Readers — Continued*

The report, *Developmental, Learning and Emotional Problems: Health of Our Nation's Children, United States, 1988*, focuses on the incidence of these problems in U.S. children. Copies of this report and additional reports from the NHIS-CH are available free of charge from the Scientific and Technical Information Branch, NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD; telephone (301) 436-8500.

**NCHS Report on Infertility**

Cycle IV of the National Survey of Family Growth (NSFG), conducted in 1988 by CDC's National Center for Health Statistics (NCHS), was based on personal interviews with a national sample of women aged 15–44 years. The interview focused on the respondent's fecundity; past and current use of contraception; dates and outcomes of pregnancies, if any; marriages; use of family planning and infertility services; and a wide range of social, economic, and demographic characteristics. Statistics in the report highlight the first national estimates of trends in the fecundity status of all reproductive-aged women in the United States, regardless of marital status.

The report, *Fecundity and Infertility in the United States, 1965–88*, is available free of charge from the Scientific and Technical Information Branch (STIB), NCHS, CDC, Room 1064, 6525 Belcrest Road, Hyattsville, MD; telephone (301) 436-8500. Additional reports from Cycle IV of the NSFG are also available from STIB.

**NCHS Report on Deaths Among Persons of Hispanic Origin**

The first detailed report containing data on the mortality of the Hispanic-origin population for a 15-state reporting area is available from CDC's National Center for Health Statistics. Population counts are taken from the 1980 decennial census for major Hispanic groups in the reporting area. Mortality information is taken from death certificates as reported from the National Vital Statistics system.

Single copies of the report, *Deaths of Hispanic Origin, 15 Reporting States, 1979–81*, are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402; telephone (202) 783-3238; stock #017-022-01127-1; price \$3.75.

**NCHS Report on Injuries by Selected Characteristics**

National estimates of the average annual incidence of injuries requiring either medical attention or restricted activity are available from a new report based on data collected by the National Health Interview Survey (NHIS) conducted by CDC's National Center for Health Statistics (NCHS). Data on injuries are presented by type of injury, cross-tabulated by a wide array of sociodemographic characteristics.

Single copies of the report, *Types of Injuries by Selected Characteristics: United States, 1985–87* are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402; telephone (202) 783-3238; stock #017-022-01126-3; price \$3.75.

*Notices to Readers — Continued***Training Course for Hospital Epidemiologists**

CDC, the Society for Hospital Epidemiology of America, and the American Hospital Association (AHA) will cosponsor a training course for hospital epidemiologists May 16–19, 1991, in Chicago. The course is intended for infectious disease fellows and new hospital epidemiologists and emphasizes hands-on exercises in which participants work in small groups to detect, investigate, and control epidemiologic problems encountered in the hospital setting. These working sessions are supplemented with lectures and seminars covering fundamental aspects of hospital epidemiology. Course information is available from Gina Pugliese, AHA, 840 North Lake Shore Drive, Chicago, IL 60611; telephone (312) 280-6404. For registration, contact Phil Gordon, AHA, at (312) 280-6764.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Mailstop C-08, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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